1. BASIC INFORMATION

Subject area	Research Methodology
Degree	Bachelor in Nurging
School/Faculty.	Biomedical and Health Science
Year: Second	Year: Second
ECTS: 6	6 ECTS
Type	Compulsory
Language/s	Spanish
Delivery mode	On Campus
Semestre	Semester 2

1. PRESENTATION

The purpose of this course is to provide students of Physiotherapy and Nursing with knowledge of Clinical Documentation and Basic Statistics. This knowledge is crucial for both daily clinical practice and research activities.

In the Documentation part, general aspects of bibliographic information search, database management, understanding of the scientific method and evidence-based Physiotherapy, analysis of research activity, and basic aspects of scientific production will be addressed.

In the Statistics part, the most relevant aspects for clinical practice and scientific production related to Descriptive Statistics and Hypothesis Testing, as well as probability applied to Health Sciences, will be studied.

2. COMPETENCES AND LEARNING OUTCOMES

General and Basic Competences:

• CG3 - Understand and apply the theoretical and methodological foundations and principles of nursing.

• CG4 - Understand the interactive behavior of individuals based on gender, group, or community, within their social and multicultural context.

• CG7 - Understand people without prejudice, considering their physical, psychological, and social aspects as autonomous and independent individuals, ensuring respect for their opinions, beliefs, and values, guaranteeing the right to privacy through confidentiality and professional secrecy.

• CG9 - Promote healthy lifestyles and self-care, supporting the maintenance of preventive and therapeutic behaviors.

• CG12 - Know the ethical and deontological code of Spanish nursing, understanding the ethical implications of health in a globally transforming context.

• CB1 - Students have demonstrated knowledge and understanding in an area of study that builds on general secondary education, supported by advanced textbooks, including some aspects from the forefront of their field of study.

• CB2 - Students can apply their knowledge to their work or vocation in a professional manner and possess the competencies usually demonstrated through the development and defense of arguments and the resolution of problems within their field of study.

• CB3 - Students have the ability to gather and interpret relevant data (usually within their field of study) to make judgments that include reflection on relevant social, scientific, or ethical issues.

• CB4 - Students can convey information, ideas, problems, and solutions to both specialized and non-specialized audiences.

• CB5 - Students have developed the learning skills necessary to undertake further studies with a high degree of autonomy.

Transversal Competences:

• CT01 - Responsibility: The student is capable of assuming the consequences of their actions and being accountable for their own acts.

• CT02 - Self-confidence: The student can act with confidence and with sufficient motivation to achieve their goals.

• CT08 - Initiative: The student is capable of proactively anticipating and proposing solutions or alternatives to presented situations.

• CT09 - Planning: The student can effectively determine their goals and priorities by defining the optimal actions, deadlines, and resources required to achieve such goals.

• CT11 - Entrepreneurship: The student is capable of undertaking and starting a work, business, or endeavor in their professional field.

• CT04 - Communication Skills: The student is capable of expressing concepts and ideas effectively, including the ability to communicate in writing concisely and clearly, as well as speaking in public effectively.

• CT05 - Interpersonal Understanding: The student is capable of active listening in order to reach agreements, using an assertive communication style.

Specific Competences:

• CE8 - Identify the psychosocial responses of individuals to different health situations (particularly illness and suffering), selecting appropriate actions to provide assistance. Establish an empathetic and respectful relationship with the patient and family, according to the individual's situation, health problem, and stage of development. Use strategies and skills that enable effective communication with patients, families, and social groups, as well as the expression of their concerns and interests.

• CE9 - Recognize life-threatening situations and know how to perform basic and advanced life support maneuvers.

• CE2 - Know the use and indication of health products linked to nursing care.

• CE3 - Know the different groups of drugs, the principles of their authorization, use, and indication, and their mechanisms of action.

• CE4 - Use medications, evaluating the expected benefits and the associated risks and/or effects derived from their administration and consumption.

• CE5 - Know and assess the nutritional needs of healthy individuals and those with health problems throughout the life cycle, to promote and reinforce healthy dietary behavior. Identify nutrients and the foods in which they are found. Identify the most prevalent nutritional problems and select appropriate dietary recommendations.

• CE6 - Apply technologies and information and communication systems for health care.

• CE7 - Know the pathophysiological processes and their manifestations, and the risk factors that determine states of health and disease in the different stages of the life cycle.

• CE1 - Know and identify the structure and function of the human body. Understand the molecular and physiological bases of cells and tissues.

• CE10 - Know and identify the psychological and physical problems derived from gender violence to empower the student in the prevention, early detection, assistance, and rehabilitation of victims of this form of violence.

Learning Outcomes:
• RA1 - Understand and apply the scientific method through programs of basic and applied research.
• RA2 - Know and apply the technologies and information and communication systems for health care.
• RA3 - Establish evaluation mechanisms, considering the scientific-technical aspects and those of quality.
• RA4 - Relevant knowledge of and ability to apply technology and informatics to health care.
• RA5 - Relevant knowledge of and ability to apply principles of quantitative and qualitative research in Nursing.

The table below shows the relationship between the competences developed in the subject and the learning outcomes pursued.

Competences	Learning Outcomes
CB1, CB2, CB3, CB4, CB5, CG3, CG4, CG7, CG9, CG12, CT1, CT2, CT8, CT9, CT11, CT4, CT5, CE8, CE9, CE2, CE3, CE4, CE5, CE6, CE7, CE1, CE10	RA1
CB1, CB2, CB3, CB4, CB5, CG3, CG4, CG7, CG9, CG12, CT1, CT2, CT8, CT9, CT11, CT4, CT5, CE8, CE9, CE2, CE3, CE4, CE5, CE6, CE7, CE1, CE10	RA2
CB1, CB2, CB3, CB4, CB5, CG3, CG4, CG7, CG9, CG12, CT1, CT2, CT8, CT9, CT11, CT4, CT5, CE8, CE9, CE2, CE3, CE4, CE5, CE6, CE7, CE1, CE10	RA3
CB1, CB2, CB3, CB4, CB5, CG3, CG4, CG7, CG9, CG12, CT1, CT2, CT8, CT9, CT11, CT4, CT5, CE8, CE9, CE2, CE3, CE4, CE5, CE6, CE7, CE1, CE10	RA4
CB1, CB2, CB3, CB4, CB5, CG3, CG4, CG7, CG9, CG12, CT1, CT2, CT8, CT9, CT11, CT4, CT5, CE8, CE9, CE2, CE3, CE4, CE5, CE6, CE7, CE1, CE10	RA5

3. CONTENTS

1. Quantitative Methodology: Epistemological foundations of quantitative research. Methodology, design, data analysis, and reporting of quantitative research, concept of probability. Probability distribution: Normal, Binomial, and Poisson. Inferential statistics. Hypothesis testing: tests of statistical significance. Methodological processes in epidemiological research.

2. Qualitative Methodology: Epistemological foundations of qualitative research, evidence-based clinical practice.

3. Referential Methodology: Bibliographic references, literature search, written and oral communication.

4. TEACHING-LEARNING METHODOLOGIES

The following are the types of teaching-learning methodologies that will be applied:

Lecture
Cooperative learning
Communicative tasks
Problem-Based Learning (PBL)
Simulation environments
Case method

5. TRAINING ACTIVITIES

The following are the types of training activities that will be carried out and the student's dedication in hours to each of them:

In-person Modality:

Training Activity Number of Hours	Training Activity Number of Hours
Practical Exercises 75	Practical Exercises 75

Lectures 30	Lectures 30
Seminars 15	Seminars 15
Presentations 25	Presentations 25
Tutoring 5	Tutoring 5
TOTAL	TOTAL 150h

6. ASSESSMENT

The following are the evaluation systems, as well as their weight on the total grade of the course:

In-person Modality:

Evaluation System	Weight
Objective knowledge test (*)	40%
Directed individual work, theoretical-practical (**)	35%
Oral presentations: Group activity (***)	10%
Portfolio (****)	15%

(*) A written test of the theoretical contents will be carried out. The objective test will consist of 40-60 multiple-choice questions, of which three incorrect answers will subtract one correct answer, and unanswered questions will not count. To pass the theory, it is necessary to obtain a grade equal to or greater than 5.0. The test not passed will be recovered in the extraordinary call.

(**) A final work will be carried out, evaluating together the qualitative, quantitative, or referential methodology. For this, the development of a scientific poster (in digital format) will be developed.

(***) An oral defense of the scientific poster will be carried out according to the regulations. The test not passed will be recovered in the extraordinary call.

(****) Different activities will be developed throughout the course and in the classroom: seminars, problem-solving, questionnaires, etc. Specifically, the 6 asynchronous activities and activities that the teacher carries out in class will be included.

It is necessary to obtain a grade equal to or greater than 5.0 in each of the blocks (objective knowledge test, directed individual work, oral presentations, portfolio) to be able to average with the rest of the evaluation tools.

In the Virtual Campus, when you access the course, you can consult in detail the evaluation activities that you must carry out, as well as the delivery dates and evaluation procedures for each of them. Deliveries of activities and/or work outside the deadline will not be accepted.

7. TIMETABLE

In this section, the schedule with the dates for the submission of evaluative activities for the course is provided:

Evaluative Activities	Date
Objective knowledge test	June : Ordinary call
July : Extraordinary call	
Individual directed works, theoretical-practical	Last weeks of class
Oral presentations: Group activity	Last weeks of class

This schedule may undergo modifications due to logistical reasons related to the activities. Any changes will be notified to the student in a timely manner.

8. BIBLIOGRAPHY

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Lakatos, I. (1978). The methodology of scientific research programmes. Cambridge University Press.

Lindsey, J. K. (2004). Introduction to Applied Statistics: A Modelling Approach, Oxford University Press.

Marczyk, G., DeMatteo, D., Festinger, D. (2005). Essentials of Research Design and Methodology. John Wiley & Sons.

Spiegel, M. R., Schiller, J., et al. (2013). Probabilidad y Estadística, Editorial McGraw-Hill.

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